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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,780	10/12/2001	Tuomo Syvanne	BER-021	2214
26717	7590	01/15/2004	EXAMINER	
FALK AND FISH 16590 OAK VIEW CIRCLE MORGAN HILL, CA 95037			ALI, MOHAMMAD	
			ART UNIT	PAPER NUMBER
			2177	18

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Applicati n No.

09/976,780

Applicant(s)

SYVANNE, TUOMO

Examiner

Mohammad Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration:
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This communication is responsive to the application filed on October 12, 2001.
2. The application has been examined. Claims 1-16 are pending in this Office

Action.

#### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) or (f), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

4. The references cited in the IDS, PTO-1449, Paper No. 4, have been considered.

#### ***Specification***

5. Minor informalities: in Abstract page the word "Fig. 3a" should be deleted.

Appropriate correction is required.

#### ***Claim Objections***

6. Claims 13 and 14 are objected to because of the following informalities: As understood by Examiner claims 13 and 14 are independent claims. Examiner requests put all the limitations of claim 1 to the independent claims 13 and 14 to make it independent.

Appropriate correction is required.

#### ***Drawings***

7. The drawings are objected to because they fail to show necessary textual labels of features or symbols in Figs. 1 and 8 as described in the specification. For example, placing a label, "Network", "gateway entity" with elements 12, 16 of Fig. 1, would give the viewer necessary detail to fully understand this element at a glance. Same as in Fig. 8. A *descriptive* textual label for *each numbered element* in these figures would be needed to fully and better understand these figures without

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substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown in the drawing. Optionally, applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.83. 37 CFR 1.84(n)(o) is recited below: "(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.

(o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ke et al. ('Ke' hereinafter), PCT US00/08708 in view of Michael Coss ('Coss' hereinafter), EP 0909075 A1.

With respect to claim 1,

Ke discloses a method (750) for processing data packets in a gateway element, said method comprising (see page 3, lines 10-24) the steps of:

comparing (751) a data packet to screening information comprising a set of rules (see page 3, lines 30-34), and

processing (755) a data packet according to a rule belonging to the set of rules (see page 5, lines 4-10 et seq), the header information of said data packet matching the header information of said rule (see page 8, lines 9-21, Fig. 1) , characterized in that said screening information is hierarchically structured so that it comprises a first rule, which specifies first header information, and a subset of rules relating to said first rule (see page 3, lines 30-33 et seq), and in that

in said step of comparing a data packet, said data packet is compared (754, 756) to said subset of rules only if the header information of the data packet matches the header information of the first rule (see col. 8, lines 9-21 et seq).

Ke does not explicitly indicate the claimed "hierarchical structure".

Coss discloses the claimed hierarchical structure (calling for inclusion of packet data from certain different category "hierarchical", see page 7, lines 45-50, Fig. 8).

It would have been obvious to one ordinary skill in the gateway network processing art at the time of the present invention to combined the cited references because the hierarchical structure of Coss teachings would have allowed Ke's system to improve the processing efficiency, security in the rule based information, as suggested by Coss, at page 3, lines 35-41 et seq. Hierarchical structure as taught by Coss improves the rule set applied to any packet to determine information as incoming and outgoing network interface (see page 3, lines 39-41 et seq, Coss).

As to claim 2,

Ke teaches characterized in that said subset of rules comprises a second rule, which specifies second header information, and a second subset of rules, said second subset of rules relating to said second rule (see page 3, lines 29 to page 4, lines 20), and in that in said step of comparing a data packet, said data packet is compared to said second subset of rules only, if the header information or the data packet matches the header information of the second rule (see page 8, lines 9-21 et seq).

As to claim 3,

Ke teaches characterized in that said set of rules is an ordered sequence of rules, said subset of rules is an ordered sub-sequence of said ordered sequence of rules, and in said step of comparing a data packet, said data packet is compared to the rules in the order defined by the ordered sequence (see page 3, lines 10-23 et seq).

As to claim 4,

Ke teaches characterized in that for said subset of rules, an entity which is authorized to modify said subset, is specified (see page 13, lines 22-33, Fig. 6b).

As to claim 5,

Ke teaches characterized in that at least one rule belonging to said subset of rules comprises a generic information portion, said generic information portion to be replaced with second information before a data packet is compared to said at least one rule (see page 13, lines 22-33 et seq).

As to claim 6,

Ke teaches characterized in that said screening information comprises a first part, which is modifiable by an entity authorized to configure said gateway element, and

a second part, which is modifiable by an entity specifically authorized to modify said second part (see page 3, lines 6-23 et seq).

With respect to claim 7,

Ke discloses a gateway element (80) comprising means (801) for storing screening information and means (802) for processing data packets (see page 3, lines 9-23), said processing involving comparison of a data packet header to header information specified in said screening information (see page 4, lines 8-20 et seq), characterized in that said means (802) for processing data packets are arranged to compare header information of a data packet to screening information comprising a first rule, which specifies first header information (see page 8, lines 9-21), and a subset of rules relating to said first rule, and arranged to compare a data packet to said subset of rules only if the header information of the data packet matches the header information of the first rule (see page 13, lines 21-34 et seq).

Ke does not explicitly indicate the claimed "arranged".

Coss discloses the claimed hierarchical structure (calling for inclusion of packet packet data from certain different category "arranged", see page 7, lines 45-50, Fig. 8).

It would have been obvious to one ordinary skill in the gateway network processing art at the time of the present invention to combined the cited references because the arranged of Coss teachings would have allowed Ke's system to improve the processing efficiency, security in the rule based information, as suggested by Coss, at page 3, lines 35-41 et seq. Arranged as taught by Coss improves the rule set applied

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to any packet to determine information as incoming and outgoing network interface (see page 3, lines 39-41 et seq, Coss).

As to claim 8,

Ke teaches characterized in that it further comprises means (803) for detecting generic information portions in said screening information, means (803) for receiving second information, and means (803) for replacing the generic information portion in said screening information with said second information (see page 4, lines 14-20).

As to claim 9,

Ke teaches characterized in that it further comprises means (804) for preventing modification of at least one rule belonging said information (see page 4, lines 12-20 et seq).

As to claim 10,

Ke teaches characterized in that it further comprises means (805) for receiving at least part of said screening information from a database entity (see page 4, lines 30 to page 5, lines 6).

As to claim 11,

Ke teaches characterized in that it further comprises means (806) for fetching at least part of said screening information from said database entity, said means for fetching being arranged to initiate fetching as part of configuration of said gateway element (see page 4, lines 15-20 et seq).

With respect to claim 12,



Ke discloses an arrangement (85) comprising at least one gateway element (80) and a database entity (81), said at least one gateway element (see page 3, lines 10-20, Fig. 6a) comprising means (801) for storing information for screening data packets and means (802) for processing data packets (see page 4, lines 14-20 et seq), said processing involving comparison of a data packet header to header information specified in said screening information, characterized in that said database entity comprises means (82) for providing information for screening data packets, said at least one gateway element further comprises means (805) for receiving at least part of said information for screening data packets from said database entity (see page 4, lines 9-20 et seq), and said means (802) for processing data packets are arranged to compare header information of a data packet to screening information comprising a first rule, which specifies first header information (see page 3, lines 29-33), and a subset of rules relating to said first rule, and arranged to compare a data packet to said subset of rules only if the header information of the data packet matches the header information of the first rule (see page 8, lines 8-21 et seq).

Ke does not explicitly indicate the claimed "arranged".

Coss discloses the claimed hierarchical structure (calling for inclusion of packet packet data from certain different category "arranged", see page 7, lines 45-50, Fig. 8).

It would have been obvious to one ordinary skill in the gateway network processing art at the time of the present invention to combined the cited references because the arranged of Coss teachings would have allowed Ke's system to improve the processing efficiency, security in the rule based information, as suggested by Coss,

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at page 3, lines 35-41 et seq. Arranged as taught by Coss improves the rule set applied to any packet to determine information as incoming and outgoing network interface (see page 3, lines 39-41 et seq, Coss).

With respect to claim 13,

Ke teaches a computer program comprising program code for performing all the steps of claim 1 when said program is run on a computer (see page 3, lines 9-23 et seq).

With respect to claim 14,

Ke discloses a computer program product comprising program code means stored on a computer readable medium for performing the method of claim 1 when said program product is run on a computer (see page 3, lines 9-23 et seq).

With respect to claim 15,

Ke discloses a data structure (40, 60, 64, 66) comprising screening information (see page 3, lines 9-23), characterized in that said screening information is hierarchically structured so that it comprises a first rule (401) (see page 4, lines 15-20 et seq), which specifies first header information, and a subset of rules (402, 403) relating to said first rule, said first header information being common to said rules belonging to said subset of rules (see page 8, lines 8-21).

Ke does not explicitly indicate the claimed "hierarchical structure".

Coss discloses the claimed hierarchical structure (calling for inclusion of packet packet data from certain different category "hierarchical", see page 7, lines 45-50, Fig. 8).

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It would have been obvious to one ordinary skill in the gateway network processing art at the time of the present invention to combined the cited references because the hierarchical structure of Coss teachings would have allowed Ke's system to improve the processing efficiency, security in the rule based information, as suggested by Coss, at page 3, lines 35-41 et seq. Hierarchical structure as taught by Coss improves the rule set applied to any packet to determine information as incoming and outgoing network interface (see page 3, lines 39-41 et seq, Coss).

As to claim 16,

Ke teaches characterized in that said subset of rules comprises a second rule (421), which specifies second header information (see page 3, lines 25-34), and a second subset of rules (422, 423), said second subset of rules relating to said second rule, said second header information being common to said rules belonging to said second subset of rules (see page 8, lines 8-21, Fig. 6a).

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***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (703) 605-4356. The examiner can normally be reached on Monday to Thursday from 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790 or Customer Service (703) 306-5631. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for any communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.



Mohammad Ali

Patent Examiner

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January 11, 2004